IEEE P802.11
Wireless LANs

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| LB 200 cluase 3 comment resolution |
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Abstract

This submission proposes comment resolutions of the clause 3 from TGah Draft 1.0.

* CIDs: 2029, 2030, 1627, 1653, 1660, 2079, 2344, 2491, 2605, 2606, 2797, 2970, 1654, 1655, 1656, 1657, 1658, 1659, 2345, 2346, 2650, 2784, 2929

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGah Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGah Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGah Editor: Editing instructions preceded by “TGah Editor” are instructions to the TGah editor to modify existing material in the TGah draft. As a result of adopting the changes, the TGah editor will execute the instructions rather than copy them to the TGah Draft.***

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 2029 | 1.07 | 3.1 | "RAW" is used extensively in the draft, so the definition should be added in the Definition section | Add definition of RAW | Revised- Agree in principle. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2029. |
| 2030 | 1.07 | 3.1 | "TWT" is used extensively in the draft, so the definition should be added in the Definition section | Add definition of TWT | Revised- Agree in principle. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2030. |
| 1627 | 1.21 | 3.2 | The sensor type station definition is too vague. Why do we need a new type of STA? | Add a section describing what a sensor type station is and why there are specific capabilities in the amendment to address this station type. | Revised- I agree that the definition of the sensor type station is vague. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 1627, 2079, 2344, 2606. |
| 1653 | 1.16 | 3.2 | Per the 802.11 Style Guide "set to" is used only when the variable is being set, not read. In addition, the value a bit is set to is 1 (or 0), and NOT '1' or '0' ('1' and '0' do not fit into a single bit). In addition, the logic of these words is confused: "with their bits"? Are bits actually encoded by a bitmap? | Replace "AIDs with their corresponding bits set to '1' if encoded by by partial virtual bitmap." with "AIDs that are mapped by a partial virtual bitmap and whose corresponding bits in that bitmap each have the value 1." | Revised- Agree in principle. The definition of the paged AID is vague.Please see the proposed resolution of CID 2491. (It is almost same comment.)TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2491. |
| 1660 | 1.18 | 3.2 | "of TIM" needs an article. | Replace "of TIM" with "of the TIM". There are thousands of missing articles in this draft; the TG needs to find a technical editor to turn the text of this draft into correct English (American English per the IEEE Style Manual). | Revised- Agree in principle. The definition of the paged AID is vague.Please see the proposed resolution of CID 2491. (It is almost same comment.)TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2491. |
| 2079 | 23.21 | 3.2 | There seems to be reccursive reference here: a sensor STA is characterized by a large number of STAs. Large number of stations cannot be describing the station itself. | Change definition to: "a sensor type STA is a non-AP STA using data frames with small payload size. A sensor type STA is also expected to have limited available power and low traffic volume." | Revised- I agree that the definition of the sensor type station is vague. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 1627, 2079, 2344, 2606. |
| 2344 | 1.21 | 3.2 | "large number of STAs per AP" is not a description of a STA's characteristics, except for AP STAs | Change to "and, for an AP, with a large number of associated STAs" (but is such a STA AP really a sensor type STA "low traffic" and "limited available power"? | Revised- I agree that the definition of the sensor type station is vague. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 1627, 2079, 2344, 2606. |
| 2491 | 1.15 | 3.2 | Is there a different way to encode - and what is being encoded here anyway? The structure of the sentence suggests that the AID is being encoded, but that is not quite what is happening. "The paged AIDs refer to those AIDs with their corresponding bits being set to '1' if encoded by partial virtual bitmap." In other words, why is "if" included in this sentence? | Change to: "A paged AID is an AID for which the corresponding bit in a transimtted TIM is set to '1'." | Revised- Agree in principle. A minor editorial change is that the AID abbreviation is fully expanded within this definition based on the CID 2797. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2491, 2797. |
| 2605 | 1.12 | 3.2 | It seems that there are a number of terms that need definition, e.g.Restricted Access Window, Target Wake Time, Periodic Restricted Access Window, Spatial Orthogonal frame exchange, Change Sequence, etc. | Add definition of terms introduced by 802.11ah as needed. | Revised- Agree in principle. Add definition of the Restricted Access Window and the Target Wake Time. Please see the proposed resolution of CID 2029, 2030. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2029, 2030. |
| 2606 | 1.21 | 3.2 | The definition fo "sensor type station" seems to focus on its traffic characteristics rather than its function. Other devices, not necessirly sensors, may have the same traffic characteristics, but don't consititute a sensor device | change the definition to focus on sensors' function | Revised- I agree that the definition of the sensor type station is vague. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 1627, 2079, 2344, 2606. |
| 2797 | 1.14 | 3.2 | It would be easier if the AID abbreviation was fully expanded within this definition. | as per comment | Revised- Agree in principle. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2491, 2797. |
| 2970 | 1.18 | 3.2 | acronym "TIM" in the phrase "non-traffic indication map (TIM) " is missleading | "non-traffic indication map (non-TIM)" | Accepted- Agree with the comment.  |
| 1654 | 1.29 | 3.3 | "block acknowledgement TWT" is not the name of a frame, field, etc. so does not need initial caps. | Replace "Block Acknowledgement" with "block acknowledgement". | Accepted- Agree with the comment. |
| 1655 | 1.31 | 3.3 | Insert definition of "OLB" | Insert "OLB offset, length, bitmap (mode)" | Revised-OLB does not say mode. Modify "OLB offset, length, bitmap”TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 1655, 1656. |
| 1656 | 1.35 | 3.3 | Insert definition of "OLB" | Insert "OLB offset, length, bitmap (mode)" | Revised-OLB does not say mode. Modify "OLB offset, length, bitmap”TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 1655, 1656. |
| 1657 | 1.39 | 3.3 | "speed frame" is not the name of a frame, field, etc. so does not need initial caps. | Replace "Speed Frame" with "speed frame" throughout the draft. | Accepted- Agree with the comment. |
| 1658 | 1.42 | 3.3 | "short TWT acknowledgement" is not the name of a frame, field, etc. so does not need initial caps. | Replace "Short TWT Acknowledgement" with "short TWT acknowledgement" throughout the draft. | Accepted- Agree with the comment. |
| 1659 | 1.43 | 3.3 | "TWT acknowledgement" is not the name of a frame, field, etc. so does not need initial caps. | Replace "TWT Acknowledgement" with "TWT acknowledgement" throughout the draft. | Accepted- Agree with the comment. |
| 2345 | 1.31 | 3.3 | 11ac already uses the term "Partial AID", so "PAID" is liable to lead to confusion | Find another term | Revised-Agree in principle. Please see the proposed resolution of CID 2929. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2929. |
| 2346 | 1.00 | 3.3 | Why do some acronym definitions use lowercase and some uppercase? | Make sure the case follows the IEEE 802.11 style | Revised-Agree in principle.Please use a lowercase if it is not the name of a frame and field. TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2346. |
| 2650 | 1.00 | 3.3 | Acronym RID is missing or not expanded | spell out the term whenever it is used | Revised-Agree in principle.TGah editor to make changes shown in 11-14-0270r0 under the heading for CID 2650. |
| 2784 | 1.45 | 3.3 | TSBTT should be listed in 3.3 Abbreviations and acronyms. | Add "TSBTT : Target short beacon Transmission Time" | Accepted- Agree with the comment. |
| 2929 | 1.32 | 3.3 | "Partial AID" is originally defined in TGac Draft. This abbreviation should not be used for the consistency of the two amendments. | Replace "PAID" with "Partial AID" throughout the draft. Delete "PAID" definition in section 3.3. | Accepted- Agree with the comment. |

***TGah editor: Modify the clause 3 as the following:***

* 1. **Definitions specific to IEEE 802.11**

**paged association identifier (AID)**: A paged AID is an association identifier for which the corresponding bit in a transimtted TIM is set to '1'. ~~The paged AIDs refer to those AIDs with their corresponding bits being set to ‘1’ if encoded by partial virtual bitmap. (#587)~~

**non-traffic indication map (non-TIM) station (STA)**: The STA which does not require reception of the TIM.

**sensor type station (STA)**: A sensor type STA is a non-AP STA using data frames with small payload size. A sensor type STA is also expected to have limited available power and low traffic volume. ~~The STA characterized as small data size, low traffic, limited available power, and large number of STAs per AP.~~

**1 MHz physical layer protocol data unit (PPDU)**: A Clause 24 1 MHz sub 1 GHz (S1G) PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1).

**1 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 1 MHz transmit spectral mask defined in Clause 24 and that is a 1 MHz S1G PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1).

**2 MHz physical layer protocol data unit (PPDU)**: A Clause 24 2 MHz sub 1 GHz (S1G) PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2) or a Clause 24 2 MHz sub 1 GHz (S1G) 1MHz duplicated PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2).

**2 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 2 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1. A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)
2. A 2 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)

**4 MHz physical layer protocol data unit (PPDU)**: A Clause 24 4 MHz sub 1 GHz (S1G) PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4), a Clause 24 4 MHz sub 1 GHz (S1G) 1MHz duplicated PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4) or a Clause 24 4 MHz sub 1 GHz (S1G) 2MHz duplicated PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4).

**4 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 4 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1. A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)
2. A 2 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)
3. A 4 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU, S1G 2MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4)

**8 MHz physical layer protocol data unit (PPDU)**: A Clause 24 8 MHz sub 1 GHz (S1G) PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW8), a Clause 24 8 MHz sub 1 GHz (S1G) 1MHz duplicated PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW8) or a Clause 24 8 MHz sub 1 GHz (S1G) 2MHz duplicated PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW8).

**8 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 8 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1. A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)
2. A 2 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)
3. A 4 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU, S1G 2MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4)
4. An 8 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU, S1G 2MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW8)

**16 MHz physical layer protocol data unit (PPDU)**: A Clause 24 16 MHz sub 1 GHz (S1G) PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW16), a Clause 24 8 MHz sub 1 GHz (S1G) 1MHz duplicated PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW16) or a Clause 24 8 MHz sub 1 GHz (S1G) 2MHz duplicated PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW16).

**16 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 16 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1. A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)
2. A 2 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)
3. A 4 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU, S1G 2MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4)
4. An 8 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU, S1G 2MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW8)
5. An 16 MHz S1G non-duplicate PPDU, S1G 1MHz duplicate PPDU, S1G 2MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW16)

**primary 2 MHz channel**: In a 4 MHz, 8 MHz, 16 MHz sub 1 GHz basic service set (BSS), the 2 MHz channel that is used to transmit 2 MHz PPDUs.

**primary 4 MHz channel**: In an 8 MHz, 16 MHz sub 1 GHz (S1G) basic service set (BSS), the 4 MHz channel that is used to transmit 4 MHz PPDUs.

**primary 8 MHz channel**: In a 16 MHz sub 1 GHz (S1G) basic service set (BSS), the 8 MHz channel that is used to transmit 8 MHz PPDUs.

**secondary 1 MHz channel**: In a 2 MHz sub 1 GHz (S1G) basic service set (BSS), the 1 MHz channel adjacent to the primary 1 MHz channel that together form the 2 MHz channel of the 2 MHz S1G BSS. In a 4 MHz S1G BSS, the 1 MHz channel adjacent to the primary 1 MHz channel that together form the primary 2 MHz channel of the 4 MHz S1G BSS. In an 8 MHz S1G BSS, the 1 MHz channel adjacent to the primary 1 MHz channel that together form the primary 2 MHz channel of the 8 MHz S1G BSS. In a 16 MHz S1G BSS, the 1 MHz channel adjacent to the primary 1 MHz channel that together form the primary 2 MHz channel of the 16 MHz S1G BSS.

**secondary 2 MHz channel**: In a 4 MHz sub 1 GHz (S1G) basic service set (BSS), the 2 MHz channel adjacent to the primary 2 MHz channel that together form the 4 MHz channel of the 4 MHz S1G BSS. In an 8 MHz S1G BSS, the 2 MHz channel adjacent to the primary 2 MHz channel that together form the primary 4 MHz channel of the 8 MHz S1G BSS. In a 16 MHz S1G BSS, the 2 MHz channel adjacent to the primary 2 MHz channel that together form the primary 4 MHz channel of the 16 MHz S1G BSS.

**secondary 4 MHz channel**: In an 8 MHz sub 1 GHz (S1G) basic service set (BSS), the 4 MHz channel adjacent to the primary 4 MHz channel that together form the 8 MHz channel of the 8 MHz S1G BSS. In a 16 MHz S1G BSS, the 4 MHz channel adjacent to the primary 4 MHz channel that together form the primary 80 MHz channel.

**secondary 8 MHz channel**: In an 16 MHz sub 1 GHz (S1G) basic service set (BSS), the 8 MHz channel adjacent to the primary 8 MHz channel that together form the 16 MHz channel of the 16 MHz S1G BSS.

**sub 1 GHz modulation and coding scheme (S1G-MCS)**: A specification of the sub 1 GHz (S1G) physical layer (PHY) parameters that consists of modulation order (e.g., BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM) and forward error correction (FEC) coding rate (e.g., 1/2 rep2, 1/2, 2/3, 3/4, 5/6) that is used in a S1G PPDU.

**sub 1 GHz (S1G) physical layer protocol data unit (PPDU)**: A PPDU transmitted with the TXVECTOR parameter FORMAT equal to S1G, S1G\_DUP\_1M or S1G\_DUP\_2M.

**p~~P~~rotocol v~~V~~ersion 0 (PV0) MPDU**: An MPDU with the Protocol Version field of the Frame Control field of the MPDU header equal to 0.

**p~~P~~rotocol v~~V~~ersion 1 (PV1) MPDU**: An MPDU with the Protocol Version field of the Frame Control field of the MPDU header equal to 1.

**restricted access window:** A medium access interval for a group of STAs during which a STA in the RAW group indicated by the RPS element is allowed to contend for the medium access.

**target wake time:** A specific time or set of times for individual STAs to wake to exchange frames with other STAs.

* 1. **Abbreviations and acronyms**

***Insert the following acronym definitions (maintaining alphabetical order):***

ADE AID with d~~D~~ifferential e~~E~~ncoding(#1636)

BAT b~~B~~lock a~~A~~cknowledgement TWT

BPN base packet number

EOM end of multi-user

OLB offset, length, bitmap ~~Offset Length Block(#1635)~~

~~PAID partial association identifier~~

PRAW periodic restricted access window(#896)

PV0 p~~P~~rotocol v~~V~~ersion 0

PV1 p~~P~~rotocol v~~V~~ersion 1

RAW restricted access window(#368)

RID response indication deferral

RPS RAW parameter set

S1G sub 1 GHz

S1G\_1M 1 MHz format

S1G\_SHORT greater than or equal to 2MHz short format

S1G\_LONG greater than or equal to 2 MHz long format

SC Sequence Counter

SF s~~S~~peed f~~F~~rame

SST subchannel selective transmission

STACK s~~S~~hort TWT a~~A~~cknowledgement

TACK TWT a~~A~~cknowledgement

TSBTT target short beacon transmission time

TWT target wake time

USF u~~U~~nified s~~S~~caling f~~F~~actor

***TGah editor: Replace “PAID” with “partial AID”*** ***throughout the TGah draft 1.2.***

***TGah editor: Replace “Short TWT Acknowledgement” with “short TWT acknowledgement”, Page 164, Line 57, TGah draft 1.2.***